



# Layers in Intrusion and Network Analysis Policies

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The following topics explain how to use layers in intrusion and network analysis policies:

- [Layer Basics, on page 1](#)
- [License Requirements for Network Analysis and Intrusion Policy Layers, on page 1](#)
- [Requirements and Prerequisites for Network Analysis and Intrusion Policy Layers, on page 2](#)
- [The Layer Stack, on page 2](#)
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## Layer Basics

Larger organizations with many managed devices may have many intrusion policies and network analysis policies to support the unique needs of different departments, business units or, in some instances, different companies. Configurations in both policy types are contained in building blocks called *layers*, which you can use to efficiently manage multiple policies.

Layers in intrusion and network analysis policies work in essentially the same way. You can create and edit either policy type without consciously using layers. You can modify your policy configurations and, if you have not added user layers to your policy, the system automatically includes your changes in a single configurable layer that is initially named *My Changes*. You can also add up to 200 layers where you can configure any combination of settings. You can copy, merge, move, and delete user layers and, most important, share individual user layers with other policies of the same type.

## License Requirements for Network Analysis and Intrusion Policy Layers

### Threat Defense License

IPS

# Requirements and Prerequisites for Network Analysis and Intrusion Policy Layers

## Model Support

Any.

## Supported Domains

Any

## User Roles

- Admin
- Intrusion Admin

## The Layer Stack

Layer stacks are composed of the following:

### User Layers

User-configurable layers. You can copy, merge, move, or delete any user-configurable layer and set any user-configurable layer to be shared by other policies of the same type. This layer includes the automatically-generated layer initially named My Changes.

### Built-in Layers

The read-only base policy layer. The policy in this layer can be either a system-provided policy or a custom policy you created.

By default, a network analysis or intrusion policy includes a base policy layer and a My Changes layer. You can add user layers as necessary.

Each policy layer contains complete configurations for either all preprocessors in a network analysis policy or all intrusion rules and advanced settings in an intrusion policy. The lowest, base policy layer includes all the settings from the base policy you selected when you created the policy. A setting in a higher layer takes precedence over the same setting in a lower layer. Features not explicitly set in a layer *inherit* their settings from the next highest layer where they are explicitly set. The system *flattens* the layers, that is, it applies only the cumulative effect of all settings, when it handles network traffic.



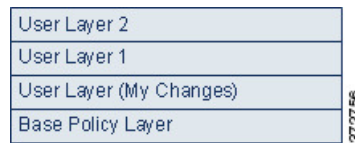
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**Tip** You can create an intrusion or network analysis policy based solely on the default settings in the base policy. In the case of an intrusion policy, you can also use Firepower rule state recommendations if you want to tailor your intrusion policy to the specific needs of your monitored network.

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The following figure shows an example layer stack that, in addition to the base policy layer and the initial My Changes layer, also includes two additional user-configurable layers, *User Layer 1* and *User Layer 2*. Note

in the figure that each user-configurable layer that you add is initially positioned as the highest layer in the stack; thus, User Layer 2 in the figure was added last and is highest in the stack.



Regardless of whether you allow rule updates to modify your policy, changes in a rule update never override changes you make in a layer. This is because changes in a rule update are made in the base policy, which determines the default settings in your base policy layer; your changes are always made in a higher layer, so they override any changes that a rule update makes to your base policy.

## The Base Layer

The base layer, also referred to as the base policy, of an intrusion or network analysis policy defines the default settings for all configurations in the policy, and is the lowest layer in the policy. When you create a new policy and change a setting without adding new layers, the change is stored in the My Changes layer, and overrides—but does not change—the setting in the base policy.

## System-Provided Base Policies

The system provides several pairs of network analysis and intrusion policies. By using system-provided network analysis and intrusion policies, you can take advantage of the experience of the Talos Intelligence Group. For these policies, Talos sets intrusion and preprocessor rule states, as well as provides the initial configurations for preprocessors and other advanced settings. You can use these system-provided policies as-is, or you can use them as the base for custom policies.

If you use a system-provided policy as your base, importing rule updates may modify settings in your base policy. However, you can configure a custom policy so that the system does not automatically make these changes to its system-provided base policy. This allows you to update system-provided base policies manually, on a schedule independent of rule updates. In either case, changes that a rule update makes to your base policy do not change or override settings in your My Changes or any other layer.

System-provided intrusion and network analysis policies are similarly named but contain different configurations. For example, the Balanced Security and Connectivity network analysis policy and the Balanced Security and Connectivity intrusion policy work together and can both be updated in intrusion rule updates.

## Custom Base Policies

You can use a custom policy as your base. You can tune settings in custom policies to inspect traffic in ways that matter most to you so you can improve both the performance of your managed devices and your ability to respond effectively to the events they generate.

If you change the custom policy that you use as the base for another policy, those changes are automatically used as the default settings of the policy that uses the base.

In addition, a rule update may affect your policy even if you use a custom base policy, because all policies have a system-provided policy as the eventual base in a policy chain. If the first custom policy in a chain (the one that uses the system-provided policy as its base) allows rule updates to modify its base policy, your policy may be affected.

Regardless of how changes are made to your base policy—whether by a rule update or when you modify a custom policy that you use as a base policy—they do not change or override settings in your My Changes or any other layer.

## The Effect of Rule Updates on Base Policies

When you import rule updates, the system modifies system-provided intrusion, access control, and network analysis policies. Rule updates can include:

- modified network analysis preprocessor settings
- modified advanced settings in intrusion and access control policies
- new and updated intrusion rules
- modified states for existing rules
- new rule categories and default variables

Rule updates can also delete existing rules from system-provided policies.

Changes to default variables and rule categories are handled at the system level.

When you use a system-provided policy as your intrusion or network analysis base policy, you can allow rule updates to modify your base policy which, in this case, is a copy of the system-provided policy. If you allow rule updates to update your base policy, a new rule update makes the same changes in your base policy that it makes to the system-provided policy that you use as your base policy. If you have not modified the corresponding setting, a setting in your base policy determines the setting in your policy. However, rule updates do not override changes you make in your policy.

If you do not allow rule updates to modify your base policy, you can manually update your base policy after importing one or more rule updates.

Rule updates always delete intrusion rules that Talos deletes, regardless of the rule state in your intrusion policy or whether you allow rule updates to modify your base intrusion policy.

Until you re-deploy your changes to network traffic, rules in your currently deployed intrusion policies behave as follows:

- Disabled intrusion rules remain disabled.
- Rules set to **Generate Events** continue to generate events when triggered.
- Rules set to **Drop and Generate Events** continue to generate events and drop offending packets when triggered.

Rule updates do not modify a custom base policy unless both of the following conditions are met:

- You allow rule updates to modify the system-provided base policy of the parent policy, that is, the policy that originated the custom base policy.
- You have not made changes in the parent policy that override the corresponding settings in the parent's base policy.

When both conditions are met, changes in the rule update are passed to the child policy, that is, the policy using the custom base policy, when you save the parent policy.

For example, if a rule update enables a previously disabled intrusion rule, and you have not modified the rule's state in the parent intrusion policy, the modified rule state is passed to the base policy when you save the parent policy.

Likewise, if a rule update modifies a default preprocessor setting and you have not modified the setting in the parent network analysis policy, the modified setting is passed to the base policy when you save the parent policy.

## Changing the Base Policy

You can choose a different system-provided or custom policy as your base policy.

You can chain up to five custom policies, with four of the five using one of the other four previously created policies as its base policy; the fifth must use a system-provided policy as its base.

### Procedure

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**Step 1** Choose **Policies > Access Control > Intrusion**.

**Step 2** Click **Snort 2 Version** next to the policy you want to edit.

If **View** (👁) appears instead, the configuration belongs to an ancestor domain, or you do not have permission to modify the configuration.

**Step 3** Click **Edit** (✎) in the required intrusion policy row.

**Step 4** Choose a base policy from the **Base Policy** drop-down list.

**Step 5** Click **Save**.

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### What to do next

- Deploy configuration changes; see [Deploy Configuration Changes](#).

### Related Topics

[Conflicts and Changes: Network Analysis and Intrusion Policies](#)

## The Cisco Recommendations Layer

When you generate rule state recommendations in an intrusion policy, you can choose whether to automatically modify rule states based on the recommendations.

As seen in the following figure, using recommended rule states inserts a read-only, built-in Cisco Recommendations layer immediately above the base layer.

Layer: User Layer 2  
Layer: User Layer 1  
Layer: User Layer (My Changes)  
Layer: Cisco Recommendations Layer  
Layer: Base Policy Layer

Note that this layer is unique to intrusion policies.

If you subsequently choose not to use recommended rule states, the system removes the Cisco Recommendations layer. You cannot manually delete this layer, but you can add and remove it by choosing to use or not use recommended rule states.

Adding the Cisco Recommendations layer adds a Cisco Recommendations link under Policy Layers in the navigation panel. This link leads you to a read-only view of the Cisco Recommendations layer page where you can access a recommendation-filtered view of the Rules page in read-only mode.

Using recommended rule states also adds a Rules sublink beneath the Cisco Recommendations link in the navigation panel. The Rules sublink provides access to a read-only display of the Rules page in the Cisco Recommendations layer. Note the following in this view:

- When there is no rule state icon in the state column, the state is inherited from the base policy.
- When there is no rule state icon in the Cisco Recommendation column in this or other Rules page views, there is no recommendation for this rule.

### Related Topics

[Tailoring Intrusion Protection to Your Network Assets](#)

## Layer Management

The Policy Layers page provides a single-page summary of the complete layer stack for your network analysis or intrusion policy. On this page you can add shared and unshared layers, copy, merge, move, and delete layers, access the summary page for each layer, and access configuration pages for enabled, disabled, and overridden configurations within each layer.

For each layer, you can view the following information:

- whether the layer is a built-in, shared user, or unshared user layer
- which layers contain the highest, that is the effective, preprocessor or advanced setting configurations, by feature name
- in an intrusion policy, the number of intrusion rules whose states are set in the layer, and the number of rules set to each rule state.

The Policy Layers page also provides a summary of the net effect of all enabled preprocessors (network analysis) or advanced settings (intrusion) and, for intrusion policies, intrusion rules.

The feature name in the summary for each layer indicates which configurations are enabled, disabled, overridden, or inherited in the layer, as follows:

When the feature is...	The feature name is...
enabled in the layer	written in plain text
disabled in the layer	struck out
overridden by the configuration in a higher layer	written in italic text
inherited from a lower layer	not present

You can add up to 200 layers to a network analysis or intrusion policy. When you add a layer, it appears as the highest layer in your policy. The initial state is Inherit for all features and, in an intrusion policy, no event filtering, dynamic state, or alerting rule actions are set.

You give a user-configurable layer a unique name when you add the layer to your policy. Later, you can change the name and, optionally, add or modify a description that is visible when you edit the layer.

You can copy a layer, move a layer up or down within the User Layers page area, or delete a user layer, including the initial My Changes layer. Note the following considerations:

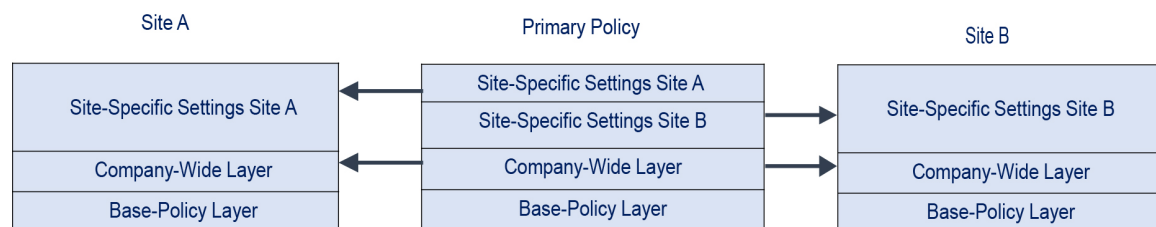
- When you copy a layer, the copy appears as the highest layer.
- Copying a shared layer creates a layer that is initially unshared and which you can then share if you choose.
- You cannot delete a shared layer; a layer with sharing enabled that you have not shared with another policy is not a shared layer.

You can merge a user-configurable layer with another user-configurable layer immediately beneath it. A merged layer retains all settings that were unique to either layer, and accepts the settings from the higher layer if both layers included settings for the same preprocessor, intrusion rule, or advanced setting. The merged layer retains the name of the lower layer. In the policy where you create a sharable layer that you can add to other policies, you can merge an unshared layer immediately above the sharable layer with the sharable layer, but you cannot merge the sharable layer with an unshared layer beneath it. In a policy where you add a shared layer that you created in another policy, you can merge the shared layer into an unshared layer immediately beneath it and the resulting layer is no longer shared; you cannot merge an unshared layer into a shared layer beneath it.

## Shared Layers

A *shared layer* is a layer you add to your policy after creating the layer in another policy where you allow it to be shared. A *sharable layer* is a layer you allow to be shared.

The following figure shows an example primary policy where you create the company-wide layer and site-specific layers for sites A and B, and allow these to be shared. You then add these as shared layers to the policies for sites A and B.



The company-wide layer in the primary policy includes settings applicable to sites A and B. The site-specific layers include settings specific to each site. For example, in the case of a network analysis policy Site A might not have web servers on the monitored network and would not require the protection or processing overhead of the HTTP Inspect preprocessor, but both sites would likely require TCP stream preprocessing. You could enable TCP stream processing in the company-wide layer that you share with both sites, disable the HTTP Inspect preprocessor in the site-specific layer that you share with Site A, and enable the HTTP Inspect preprocessor in the site-specific layer that you share with Site B. By editing configurations in a higher layer in the site-specific policies, you could also further tune the policy for each site if necessary with any configuration adjustments.

It is unlikely that the flattened net settings in the example primary policy would be useful for monitoring traffic, but the time saved in configuring and updating the site-specific policies makes this a useful application of policy layers.

Many other layer configurations are possible. For example, you could define policy layers by company, by department, by network, or even by user. In the case of an intrusion policy, you could also include advanced settings in one layer and rule settings in another.

You can allow a user-configurable layer to be shared with other policies of the same type (intrusion or network analysis). When you modify a configuration within a sharable layer and then commit your changes, the system updates all policies that share the layer and provides you with a list of all affected policies. You can only change feature configurations in the policy where you created the layer.

You cannot disable sharing for a layer that you have added to another policy; you must first delete the layer from the other policy or delete the other policy.

You cannot add a shared layer to a policy when your base policy is a custom policy where the layer you want to share was created. To do so would give the policy a circular dependency.

## Managing Layers

### Procedure

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- Step 1** While editing your Snort 2 policy, click **Policy Layers** in the navigation panel.
- Step 2** You can take any of the following management actions on the Policy Layers page:
- Add a shared layer from another policy — Click **Add Shared Layer Add** (+) next to User Layers, choose the layer from the **Add Shared Layer** drop-down list, then click **OK**.
  - Add an unshared layer — Click add layer **Add** (+) next to User Layers, enter a **Name**, and click **OK**.
  - Add or change the layer description — Click **Edit** (🔗) next to the layer, then add or change the **Description**.
  - Allow a layer to be shared with another policy — Click **Edit** (🔗) next to the layer, then clear the **Sharing** check box.
  - Change the layer name — Click **Edit** (🔗) next to the layer, then change the **Name**.
  - Copy a layer — Click **Copy** (📄) for the layer.
  - Delete a layer — Click **Delete** (🗑) for the layer, then click **OK**.
  - Merge two layers — Click **Merge** (📄) for the upper of the two layers, then click **OK**.
  - Move a layer — Click any open area in the layer summary and drag until the **Position Arrow** points to a line above or below a layer where you want to move the layer.
- Step 3** To save changes you made in this policy since the last policy commit, click **Policy Information**, then click **Commit Changes**.
- If you leave the policy without committing changes, changes since the last commit are discarded if you edit a different policy.
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**What to do next**

- Deploy configuration changes; see [Deploy Configuration Changes](#).

**Related Topics**

[Conflicts and Changes: Network Analysis and Intrusion Policies](#)

## Navigating Layers

**Procedure**

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- Step 1** While editing your Snort 2 policy, click **Policy Layers** in the navigation panel. To access your Snort 2 policy, choose **Policies > Intrusion > Intrusion Policies** tab and then click **Snort 2** against the policy you want to edit.
- Step 2** You can take any of the following actions to navigate through your layers:
- Access a preprocessor or advanced settings page — If you want to access a layer-level preprocessor or advanced setting configuration page, click the feature name in the row for the layer. Configuration pages are read-only in the base policy and in shared layers.
  - Access a rule page — If you want to access a layer-level rule configuration page filtered by rule state type, click **Drop and Generate Events**, **Generate Events**, or **Disabled** in the summary for the layer. No rules are displayed if the layer contains no rules set to the selected rule state.
  - Display the Policy Information page — If you want to display the Policy Information page, click **Policy Summary** in the navigation panel.
  - Display a layer summary page — If you want to display the summary page for a layer, click the layer name in the row for the layer or, alternately, click **Edit** (✎) next to a user layer. You can also click **View** (👁) to access the read-only summary page for a shared layer.
- Step 3** To save changes you made in this policy since the last policy commit, click **Policy Information**, then click **Commit Changes**.
- If you leave the policy without committing changes, changes since the last commit are discarded if you edit a different policy.
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**What to do next**

- Deploy configuration changes; see [Deploy Configuration Changes](#).

**Related Topics**

[Conflicts and Changes: Network Analysis and Intrusion Policies](#)

## Intrusion Rules in Layers

You can view individual layer settings on the Rules page for the layer, or view the net effect of all settings on the policy view of the Rules page. When you modify rule settings on the policy view of the Rules page, you are modifying the highest user-configurable layer in the policy. You can switch to another layer using the layer drop-down list on any Rules page.

The following table describes the effects of configuring the same type of setting in multiple layers.

**Table 1: Layer Rule Settings**

You can set...	Of this setting type...	To...
one	rule state	override a rule state set for the rule in a lower layer, and ignore all thresholds, suppressions, rate-based rule states, and alerts for that rule configured in lower layers.  If you want a rule to inherit its state from the base policy or a lower layer, set the rule state to Inherit. Note that when you are working on the intrusion policy Rules page, you cannot set a rule state to Inherit because the intrusion policy Rules page is a composite view of the net effect of all rule settings.
one	threshold SNMP alert	override a setting of the same type for the rule in a lower layer. Note that setting a threshold overwrites any existing threshold for the rule in the layer.
one or more	suppression rate-based rule state	cumulatively combine settings of the same type for each selected rule down to the first layer where a rule state is set for the rule. Settings below the layer where a rule state is set are ignored.
one or more	comment	add a comment to a rule. Comments are rule-specific, not policy- or layer-specific. You can add one or more comments to a rule in any layer.

For example, if you set a rule state to Drop and Generate Events in one layer and to Disabled in a higher layer, the intrusion policy Rules page shows that the rule is disabled.

In another example, if you set a source-based suppression for a rule to 192.168.1.1 in one layer, and you also set a destination-based suppression for the rule to 192.168.1.2 in another layer, the Rules page shows that the cumulative effect is to suppress events for the source address 192.168.1.1 and the destination address 192.168.1.2. Note that suppression and rate-based rule state settings cumulatively combine settings of the same type for each selected rule down to the first layer where a rule state is set for the rule. Settings below the layer where a rule state is set are ignored.

Color-coding on each Rules page for a specific layer indicates whether the effective state is in a higher, lower, or the current layer, as follows:

- red—the effective state is in a higher layer
- yellow—the effective state is in a lower layer
- unshaded—the effective state is in the current layer

Because the intrusion policy Rules page is a composite view of the net effect of all rule settings, rule states are not color-coded on this page.

## Configuring Intrusion Rules in Layers

In an intrusion policy, you can set the rule state, event filtering, dynamic state, alerting, and rule comments for a rule in any user-configurable layer. After accessing the layer where you want to make your changes, you add settings on the Rules page for the layer the same as you would on the intrusion policy Rules page.

## Procedure

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- Step 1** While editing your Snort 2 intrusion policy, expand **Policy Layers** in the navigation panel.
- Step 2** Expand the policy layer you want to modify.
- Step 3** Click **Rules** immediately beneath the policy layer you want to modify.
- Step 4** Modify any of the settings described in [Tuning Intrusion Policies Using Rules](#).
- Tip** To delete an individual setting from an editable layer, double-click the rule message on the Rules page for the layer to display rule details. Click **Delete** next to the setting you want to delete, then click **OK** twice.
- Step 5** To save changes you made in this policy since the last policy commit, click **Policy Information**, then click **Commit Changes**.
- If you leave the policy without committing changes, changes since the last commit are discarded if you edit a different policy.
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## What to do next

- Deploy configuration changes; see [Deploy Configuration Changes](#).

## Related Topics

[Conflicts and Changes: Network Analysis and Intrusion Policies](#)

## Removing Rule Settings from Multiple Layers

You can simultaneously remove a specific type of event filter, dynamic state, or alerting from multiple layers in your intrusion policy. The system removes the selected setting and copies the remaining settings for the rule to the highest editable layer in the policy.

The system removes the setting type downward through each layer where it is set until it removes all the settings or encounters a layer where a rule state is set for the rule. In the latter case, it removes the setting from that layer and stops removing the setting type.

When the system encounters the setting type in a shared layer or in the base policy, and if the highest layer in the policy is editable, the system copies the remaining settings and rule state for the rule to that editable layer. Otherwise, if the highest layer in the policy is a shared layer, the system creates a new editable layer above the shared layer and copies the remaining settings and rule state for the rule to that editable layer.



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**Note** Removing rule settings derived from a shared layer or the base policy causes any changes to this rule from lower layers or the base policy to be ignored. To stop ignoring changes from lower layers or the base policy, set the rule state to **Inherit** on the summary page for the topmost layer.

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## Procedure

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**Step 1** While editing your Snort 2 intrusion policy, click **Rules** immediately beneath **Policy Information** in the navigation panel. To access your Snort 2 policy, choose **Policies > Intrusion > Intrusion Policies** tab and then click **Snort 2** against the policy you want to edit.

**Tip** You can also choose **Policy** from the layer drop-down list on the Rules page for any layer, or click **Manage Rules** on the Policy Information page.

**Step 2** Choose the rule or rules from which you want to remove multiple settings:

- Choose specific — If you want to choose specific rules, check the check box next to each rule.
- Choose all — If you want to choose all the rules in the current list, check the check box at the top of the column.

**Step 3** Choose one of the following options:

- **Event Filtering > Remove Thresholds**
- **Event Filtering > Remove Suppressions**
- **Dynamic State > Remove Rate-Based Rule States**
- **Alerting > Remove SNMP Alerts**

**Note** Removing rule settings derived from a shared layer or the base policy causes any changes to this rule from lower layers or the base policy to be ignored. To stop ignoring changes from lower layers or the base policy, set the rule state to **Inherit** on the summary page for the topmost layer.

**Step 4** Click **OK**.

**Step 5** To save changes you made in this policy since the last policy commit, click **Policy Information**, then click **Commit Changes**.

If you leave the policy without committing changes, changes since the last commit are discarded if you edit a different policy.

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## What to do next

- Deploy configuration changes; see [Deploy Configuration Changes](#).

## Related Topics

[Conflicts and Changes: Network Analysis and Intrusion Policies](#)

## Accepting Rule Changes from a Custom Base Policy

When a custom network analysis or intrusion policy where you have not added layers uses another custom policy as its base policy, you must set a rule to inherit its rule state if:

- you delete an event filter, dynamic state, or SNMP alert that is set for the rule in the base policy, *and*
- you want the rule to accept subsequent changes that you make to it in the other custom policy that you use as your base policy

## Procedure

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- Step 1** While editing your Snort 2 intrusion policy, expand **Policy Layers** in the navigation panel.
- Step 2** Expand **My Changes**.
- Step 3** Click the **Rules** link immediately beneath **My Changes**.
- Step 4** Choose the rule or rules whose settings you want to accept. You have the following choices:
- Choose specific rules — If you want to choose specific rules, check the check box next to each rule.
  - Choose all rules — If you want to choose all the rules in the current list, check the check box at the top of the column.
- Step 5** Choose **Inherit** from the **Rule State** drop-down list.
- Step 6** To save changes you made in this policy since the last policy commit, click **Policy Information**, then click **Commit Changes**.
- If you leave the policy without committing changes, changes since the last commit are discarded if you edit a different policy.
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## What to do next

- Deploy configuration changes; see [Deploy Configuration Changes](#).

## Related Topics

[Conflicts and Changes: Network Analysis and Intrusion Policies](#)

# Preprocessors and Advanced Settings in Layers

You use similar mechanisms to configure preprocessors in a network analysis policy and advanced settings in an intrusion policy. You can enable and disable preprocessors on the network analysis Settings page and intrusion policy advanced settings on the intrusion policy Advanced Settings page. These pages also provide summaries of the effective states for all relevant features. For example, if the network analysis SSL preprocessor is disabled in one layer and enabled in a higher layer, the Settings page shows it as enabled. Changes made on these pages appear in the top layer of the policy. Note that the Back Orifice preprocessor has no user-configurable options.

You can also enable or disable preprocessors or advanced settings and access their configuration pages on the summary page for a user-configurable layer. On this page you can modify the layer name and description and configure whether to share the layer with other policies of the same type. You can switch to the summary page for another layer by selecting the layer name beneath **Policy Layers** in the navigation panel.

When you enable a preprocessor or advanced setting, a sublink to the configuration page for that feature appears beneath the layer name in the navigation panel, and an **Edit** (🔗) appears next to the feature on the summary page for the layer; these disappear when you disable the feature in the layer or set it to **Inherit**.

Setting the state (enabled or disabled) for a preprocessor or advanced setting overrides the state and configuration settings for that feature in lower layers. If you want a preprocessor or advanced setting to inherit its state and configuration from the base policy or a lower layer, set it to **Inherit**. Note that the **Inherit** selection is not available when you are working in the Settings or Advanced Settings page. Note also that if you inherit

a feature that is currently enabled, the feature sublink in the navigation panel and the edit icon on the configuration page no longer appear.

The system uses the configuration in the highest layer where the feature is enabled. Unless you explicitly modify the configuration, the system uses the default configuration. For example, if you enable and modify the network analysis DCE/RPC preprocessor in one layer, and you also enable but do not modify it in a higher layer, the system uses the default configuration in the higher layer.

Color-coding on each layer summary page indicates whether the effective configuration is in a higher, lower, or the current layer, as follows:

- red—the effective configuration is in a higher layer
- yellow—the effective configuration is in a lower layer
- unshaded—the effective configuration is in the current layer

Because the Settings and Advanced Settings pages are composite views of all relevant settings, these page do not use color coding to indicate the positions of effective configurations.

## Configuring Preprocessors and Advanced Settings in Layers

### Procedure

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- Step 1** While editing your Snort 2 policy, expand **Policy Layers** in the navigation panel, then click the name of the layer you want to modify.
- Step 2** You have the following choices:
- Change the layer **Name**.
  - Add or change the **Description**.
  - Check or clear the **Sharing** check box to specify whether a layer can be shared with another policy.
  - To access the configuration page for an enabled preprocessor/advanced setting, click **Edit** (✎) or the feature sublink.
  - To disable a preprocessor/advanced setting in the current layer, click **Disabled** next to the feature.
  - To enable a preprocessor/advanced setting in the current layer, click **Enabled** next to the feature.
  - To inherit the preprocessor/advanced setting state and configuration from the settings in the highest layer below the current layer, click **Inherit**.
- Step 3** To save changes you made in this policy since the last policy commit, click **Policy Information**, then click **Commit Changes**.
- If you leave the policy without committing changes, changes since the last commit are discarded if you edit a different policy.
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### What to do next

- Deploy configuration changes; see [Deploy Configuration Changes](#).

### Related Topics

[Conflicts and Changes: Network Analysis and Intrusion Policies](#)