

$$\begin{aligned}
\text{process} &::= \text{decl}^+ \\
\text{decl} &::= \text{event\_decl} \mid \text{protocol\_decl} \mid \text{variable\_decl} \mid \text{property\_decl} \mid \text{rule\_decl} \\
\text{event\_decl} &::= \mathbf{event} \left( \text{event\_name} \left( , \text{event\_name} \right)^* ; \right)^+ \\
\text{protocol\_decl} &::= \mathbf{protocol} \left( \text{protocol} ; ; \right)^+ \\
\text{protocol} &::= \mathbf{any} \mid \text{event\_name} \mid \text{protocol} ; \text{protocol} \\
&\quad \mid \text{protocol} + \text{protocol} \mid \text{protocol} * \mid \text{protocol} ? \mid \left( \text{protocol} \right) \\
\text{variable\_decl} &::= \mathbf{variable} \left( \text{var\_name} \left( , \text{var\_name} \right)^* \left( : \text{type} \right)^? ; \right)^+ \\
\text{type} &::= \mathbf{prop} \mid \mathbf{nat} \left( \text{nat\_num} \right) \\
\text{property\_decl} &::= \mathbf{property} \left( \text{ldl\_formula} ; \right)^+ \\
\text{rule\_decl} &::= \mathbf{rule} \text{ rule}^+ \\
\text{rule} &::= \mathbf{except}^? \mathbf{on} \text{event\_name} \left( , \text{event\_name} \right)^* \left( \{ \text{code} \} \right)^? \\
&\quad \left( \mathbf{when} \text{context} \left( \{ \text{code} \} \right)^? \right)^? \\
&\quad \text{action}^+ \\
\text{context} &::= \text{proposition} \mid \langle \text{ldl\_path} \rangle \text{context} \\
\text{action} &::= \mathbf{ensure} \text{ldl\_formula} \left( \{ \text{code} \} \right)^? \\
&\quad \mid \mathbf{raise} \text{event\_name} \left( + \text{event\_name} \right)^* \left( \{ \text{code} \} \right)^? \\
&\quad \mid \mathbf{do} \{ \text{code} \} \\
&\quad \mid \mathbf{preserve} \text{proposition}
\end{aligned}$$